

USSN: 10/526,132
Attorney Docket No. P02039US2A
Reply to Final Office Action dated October 28, 2009
Amendment dated December 28, 2009

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Cancelled)
2. (Previously presented) A method for preparing a functional polymer, the method comprising:
terminating a living polymer chain with a functionalizing agent where the functionalizing agent is defined by the formula

$$Z-R^4-\alpha$$

where Z is a leaving group or an addition group, R⁴ is a bond or a divalent organic group, and α is a sulfur-containing heterocycle selected from the group consisting of thiirane, thietane, thiolane, thiazoline, dihydrothiophene, thiadiazine, thioxanthene, thianthrene, phenoxathiin, dihydroisothiazole, and thienofuran group or substituted form thereof.

3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Previously Cancelled)

USSN: 10/526,132

Attorney Docket No. P02039US2A

Reply to Final Office Action dated October 28, 2009

Amendment dated December 28, 2009

8. (Previously presented) The method of claim 2, where Z comprises a halide, a thio alkoxide group, an alkoxide group, a dialkyl amine group, a nitrile group, a Schiff base, a ketone group, an aldehyde group, or an ester group.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

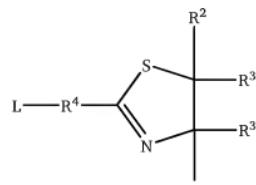
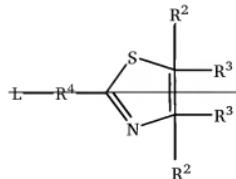
12. (Previously presented) The method of claim 2, where the polymer chain is a rubbery polymer having a Tg that is less than 0°C.

13. (Cancelled)

14. (Previously presented) The method of claim 2, where the polymer chain is polybutadiene, polyisoprene, poly(styrene-co-butadiene), poly(styrene-co-butadiene-co-isoprene), poly(isoprene-co-styrene), or poly(butadiene-co-isoprene).

15. (Cancelled)

16. (Currently Amended) The method of claim 2, where the functionalizing agent is defined by the formula



USSN: 10/526,132

Attorney Docket No. P02039US2A

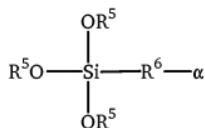
Reply to Final Office Action dated October 28, 2009

Amendment dated December 28, 2009

where L is a leaving group, R⁴ is a bond or a divalent organic group, each R² is independently hydrogen or a monovalent organic group, and each R³ is independently hydrogen or a monovalent organic group or where each R³ combine with each other to form a divalent organic group.

17. (Previously presented) The method of claim 16, where the functionalizing agent is selected from the group consisting of 2-methylthio-2-thiazoline, 2-ethylthio-2-thiazoline, 2-propylthio-2-thiazoline, 2-butylthio-2-thiazoline, 2-pentylthio-2-thiazoline, 2-hexylthio-2-thiazoline, 2-heptylthio-2-thiazoline, 2-dodecylthio-2-thiazoline, 2-phenylthio-2-thiazoline, 2-benzylthio-2-thiazoline, 2-chloro-2-thiazoline, 2-bromo-2-thiazoline, 2-iodo-2-thiazoline, 2-dimethylamino-2-thiazoline, 2-diethylamino-2-thiazoline, 2-methoxy-2-thiazoline, 2-ethoxy-2-thiazoline, 2-(N-methyl-N-3-trimethoxysilylpropyl)-thiazoline, and 2-methylthio-1-aza-3-thia-bicyclo[3.4.0]-nonene.

18. (Previously presented) The method of claim 2, where the functionalizing agent is defined by the formula



where α is a sulfur-containing heterocycle selected from the group consisting of thiirane, thietane, thiolane, thiazoline, dihydrothiophene, thiadiazine, thioxanthene, thianthrene, phenoxathiin, dihydroisothiazole, and thienofuran group or substituted form thereof, each R⁵ is independently a monovalent organic group, and R⁶ is a bond or a divalent organic group.

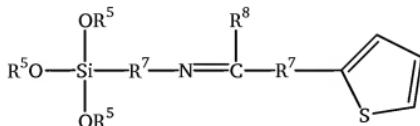
USSN: 10/526,132

Attorney Docket No. P02039US2A

Reply to Final Office Action dated October 28, 2009

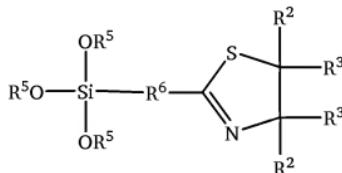
Amendment dated December 28, 2009

19. (Previously presented) The method of claim 18, where the functionalizing agent is defined by the formula



where R⁵ is independently a monovalent organic group, each R⁷ is independently a bond or a divalent organic group, and R⁸ is hydrogen or a monovalent organic group.

20. (Previously presented) The method of claim 2, where the functionalizing agent is defined by the formula



where each R² is independently hydrogen or a monovalent organic group, each R³ is independently hydrogen or a monovalent organic group or where each R³ combine with each other to form a divalent organic group, each R⁵ is independently a monovalent organic group, and R⁶ is a bond or a divalent organic group.

USSN: 10/526,132

Attorney Docket No. P02039US2A

Reply to Final Office Action dated October 28, 2009

Amendment dated December 28, 2009

21. (Previously presented) The method of claim 2, where the functionalizing agent is selected from the group consisting of 2-(N-methyl-N-3-trimethyoxy silylpropyl)thiazoline, 2-(N-methyl-N-3-trimethyoxy silylpropyl)thiophene, 2-(N-methyl-N-3-trimethyoxy silylpropyl)thiazole, and the reaction product of 2-thienyl carboxaldehyde and aminopropyl trialkoxysilane.

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)